

Dataset Documentation:

Article Title: “The Diffusion of State Firearm Regulations”

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Data Files:

- There are 3 datasets; each dataset is the same data, but each is transformed differently
 - “Final_Long_Dataset.csv” is used to create the summary statistics (Table 3)
 - “Final_Long_Scaled_Dataset.csv” is used for the NEHA analysis (Models 1-3). This dataset’s covariates are scaled (mean 0 sd 1).
 - “Final_Long_Scaled_Dataset_Lag.csv” is for Appendix Model 1. This dataset is scaled and includes a lag for the “Neighbor_Adopt_Prop” variable.

- Additionally, there is a “Presidential_Results_2020.csv” file used for creating the NEHA visualization colors (Figure 3)

Number of Observations:

“Final_Long_Dataset.csv” has a total row count of 154,065. There are 17 columns.

“Final_Long_Scaled_Dataset.csv” has a total row count of 154,065. There are 17 columns.

“Final_Long_Scaled_Dataset_Lag.csv” has a total row count of 154,065. There are 17 columns.

“Presidential_Results_2020.csv” has a total row count of 52. There are 8 columns.

Unit of Analysis:

The dependent variable is policy adoption. This is a binary 0 (not adopted), 1 (adopted)

Variables in Datasets Titled “Final....csv”:

State - A string of the corresponding state. All states minus Alaska and Hawaii.

Year - The corresponding year from 1991-2019.

Policy_Name - The name of the policy from the State Firearm Database (Siegel 2020). See the Complete_Firearm_Policy_Codebook.pdf file for policy variable names and corresponding definitions.

Policy_Adopted - Whether the policy was adopted (1) or not (0) in a given state-year.

Law_Total - The total number of restrictive firearm laws the state adopted up to a given year.

Population - A logged count of the state's population for a given year.

White_Pop - The proportion of white people in a state-year.

Mean_Income - The mean income per capita for a state-year in USD.

Unemployment_Rate - The percent of the population considered unemployed in a state-year.

Firearm_Ownership - The estimated proportion of the population that owns a firearm.

Firearm_Homicide_Rate - The number of firearm-related homicides in a state-year.

Firearm_Suicide_Rate - The number of firearm-related suicides in a state-year.

Citizen_Ideology - A measure of citizen ideology from 0-100 (conservative to liberal) in a given state-year.

State_Ideology - A measure of the state's ideology from 0-100 (conservative to liberal) in a given state-year.

Professionalism - A measure of state legislative professionalism. The greater the value, the more professional the legislature.

Female_Legislators - The proportion of the state legislature that is female in a given state-year.

Neighbor_Adopt_Prop - The number of geographically bordering states adopting a firearm policy in the state-year.

Variables in Dataset Titled "Presidential_Results_2020.csv":

State - The full state name.

State_abr - The state's postal abbreviation.

Trump_pct - The proportion of the vote won by Trump in 2020.

Biden_pct - The proportion of the vote won by Biden in 2020.

Trump_vote - The count of votes for Trump in 2020.

Biden_vote - The count of votes for Biden in 2020.

Trump_win - A binary for if Trump won the state in 2020. 1 for won, 0 for lost.

Biden_win - A binary for if Biden won the state in 2020. 1 for won, 0 for lost.

Data Sources:

The Correlates of State Policy Project (CSPP) provided the population, unemployment, and income estimates.

To calculate the proportion of white individuals in each state, I utilized the CDC's WONDER database.

The CDC WISQARS database provided estimates of total firearm deaths.

The measure of citizen ideology was derived from the revised 1960-2016 citizen ideology series, which is a continuation of the Berry et al. (1998) scores. Similarly, the state ideology score is based on the NOMINATE measure of state government ideology and was originally produced by Berry et al. (2010) and has since been updated.

I utilized Brown-Mitchell scores of legislative professionalism, which have been demonstrated to have precision advantages compared to previous measures of professionalism (Brown and Mitchell 2024).

Schiller and Sidorsky (2022) provided the proportion of female members in the legislature.

Finally, I used Schell et al.'s (2020) proxy measure of firearm ownership.

After compiling these measures into one dataset, I was left with minimal missingness (~5%). Unemployment, citizen ideology, and state ideology had missing values primarily at the tail-end of the dataset's timeframe. To impute these variables, I utilized Kalman filtering-based imputation; this approach models missing data through the use of a structural time series model. After visually inspecting the imputed dataframe, there were no apparent outliers or problematic estimates.